REMARKS

I. Introduction:

Claims 1, 21, and 30 are amended, claims 11 and 22 are cancelled, and claim 34 is added herein. With entry of this amendment, claims 1-10, 12-21, and 23-34 will be pending.

II. Drawing and Specification Objections:

The drawings are objected to as not showing the "liners" in claim 11 and the specification has been objected to as failing provide proper antecedent basis for the liners. Claim 11 has been cancelled herein. However, applicants respectfully point out that the specification supports the liners at page 9, lines 9-11.

III. Claim Rejections Under 35 U.S.C. 112:

Claims 21-27 stand rejected under 35 U.S.C. 112 as not being enabled by the specification. The Examiner believes that the specification does not provide reasonable enablement for a sealing device comprising sealing caps when the base comprises chamfered ridges. Applicants respectfully submit that these claims are enabled since the interchanging of the chamfered ridges and sealing device is described with respect to the first embodiment at page 10, lines 6-9 of the specification. Applicants have, however, amended claim 21 to specify that the chamfered ridge is formed in the sealing cap.

IV. Claim Rejections Under 35 U.S.C. 102 and 103:

Claim 1-10, 12-13, 19-21, and 26-29 stand rejected under 35 U.S.C. 102(b) as being anticipated by PCT Application No. WO 98/36826 (Wendelbo et al.).

Claim 1 is directed to an apparatus for use in parallel reaction of materials. The apparatus includes a base having a plurality of reaction wells and a sealing device positioned over the reaction wells for individually sealing each of the reaction wells. One of the sealing device and the base has chamfered ridges extending generally around a periphery of the reaction wells and the other of the sealing device and base has a contact surface formed from a material softer than a material of the chamfered ridges to create a knife-edge seal between the sealing device and the base when the sealing device and the base are forced into contact with one another. Claim 1 has been amended to clarify that the sealing device is nonporous and has a rigid contact surface.

Wendelbo et al. disclose a multiautoclave for combinatorial synthesis of zeolites and other materials. The multiautoclave includes a block having a plurality of openings extending therethrough and lined with an inert material (e.g., polymer material). The block may be formed from stainless steel, aluminum, titanium, Teflon, polypropylene, or PEEK. The block typically includes 10 to 10,000 openings, each opening forming a chamber having a volume of .001 ml. to 10 ml. (see Fig. 2). As shown in the exploded view of Fig. 1, the multiautoclave further includes a bottom plate 7a and a top plate 7b disposed on opposite sides of the block 2. Sealing devices (balls 4 or disks 5) are interposed between the plates 7a, 7b and the block 2 to seal the chambers when the bottom and top plate are pressed against the block (Figs. 1 and 3). Bolts 9, 11 are used to attach the plates to the block. The sealing devices are formed from an elastomer material that can withstand temperatures of at least 200°C and may include a Teflon liner on the side adjacent to the chamber. A thin sheet 3a, 3b may also be interposed between the block 2 and the sealing devices. Figs. 5a and 5b show an alternate design in which the sealing balls or disks are replaced with a polymer

sheet (thin polymer film) 3a, 3b and the block 2 is machined so that sharp edges extend outwardly from the periphery of each opening. The sharp edges cut into the polymer sheet to prevent leakage between adjacent chambers. As shown in Fig. 5b, the sharp edges extend into the polymer sheet and not into the bottom and top plates 7a, 7b.

Wendelbo et al. do not disclose a rigid sealing device or a rigid contact surface formed on one of the sealing device and the base to create a knife-edge seal between the sealing device and the base. The sealing device of Wendelbo et al. is a thin polymer sheet, such as a gasket material, that provides a surface for the sharp edges to cut into. As shown in Fig. 5b, the sharp edges easily cut deeply into the polymer sheet which does not have a rigid contact surface.

Accordingly, claim 1 is submitted as not anticipated by Wendelbo et al.

Claims 2-10, 12-21, 23-29 and new claim 34, depending either directly or indirectly from claim 1, are submitted as patentable for the same reasons as claim 1.

Claim 2 is further submitted as patentable over Wendelbo et al., which do not disclose a base and sealing device both formed from metal.

Claim 21 is further submitted as patentable over Wendelbo et al., which do not disclose a plurality of sealing caps for sealing each of the reaction wells. As discussed above, sealing is instead provided by a single sealing sheet.

Claims 1, 3, 6, 8, 12-13, 19, and 30 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,948,442 (Manns).

Manns discloses a method of making a multiwell test plate. The plate includes a tray 20 having an array of wells, filter means, and a thermoplastic tray 24 for supporting the filter sheet 22. In order to prevent cross-talk between the wells along the filter, facing surfaces of the trays include mating ridges and grooves around each well and aperture. The Examiner refers to filter sheet 22 as sealing means. The filter

sheet is a microporous membrane filter formed of cellulose acetate or similar material. Manns does not disclose a nonporous rigid sealing device as required by amended claim 1.

Accordingly, claim 1 is submitted as not anticipated by Manns.

Claims 2-10, 12-21, 23-29, and new claim 34 are submitted as patentable for the same reasons as claim 1.

Claim 30 is directed to a parallel batch reactor comprising a base having a plurality of openings, a plurality of vessels sized for being received in the openings within the base, and a sealing device formed from a rigid material softer than the material of the vessels. The vessels each include a chamfered periphery edge configured to deform the rigid sealing device. As described above, Manns does not disclose vessels having chamfered edges. As shown in Fig. 5 of the Manns patent, the chamfered edges are formed in tray 24 and not reaction wells 28. Furthermore, as previously discussed, Manns does not disclose a rigid sealing device.

Accordingly, claim 30 is submitted as not anticipated by Manns.

Claims 1, 3, 6-8, 12-13, 15, 17, 19-22, 26, 28-30, and 33 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,741,463 (Sanadi).

Sanadi discloses an apparatus for preventing cross-contamination of multi-well test plates. The apparatus includes a tray having a plurality of tubes. As shown in Fig. 8A, tube 114 may be sealed by a cap 123. The tubes 114 include top portions 119 having flared necks 120. The cap assembly 122 includes caps 123 and vertical walls 124 which project down vertically between the caps from a lower surface of the cap assembly. When lid 126 is clamped in place, the walls 128 of caps 123 mate with flared necks 120 to seal tubes 114 with a friction fit therebetween. This configuration allows sealing to be achieved with very little pressure. Thus, removal of a clamp only

results in the cap assembly slightly rising. Upon removal of the clamp, walls 128 of the caps 123 will remain in place mating with flared necks 120 of tubes 114.

Sanadi does not teach a knife-edge seal between a sealing device and base as required by claim 1 or chamfered edges which deform a sealing device when the sealing device is forced into contact with the chamfered edges as required by claim 30. The cap and tubes of Sanadi are configured simply to provide a friction fit between two mating surfaces (wall of cap and flared neck of tube). Furthermore, Sanadi does not disclose a contact surface formed from a material softer than a material of the chamfered ridges, as required by claims 1 and 30.

Accordingly, claims 1 and 30 are submitted as not anticipated by Sanadi.

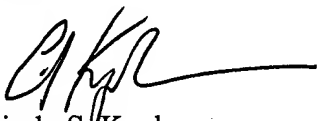
Claims 2-10, 12-21, 23-29, and 34, depending either directly or indirectly from claim 1, and claims 31-33, depending directly from claim 30, are submitted as patentable for the same reasons as discussed above for claims 1 and 30, respectively.

Applicants respectfully submit that independent claims 1 and 30, and claims depending therefrom, are patentable over the art of record. In particular, with respect to claim 1, the Applicants' invention – requiring a rigid sealing device or a rigid contact surface formed on one of the sealing device and the base to create a knife-edge seal between the sealing device and the base – provides for improved sealing and isolation of an array of adjacent reactor vessels at higher temperatures and pressures than could be achieved with the prior art devices. Certain dependent claims, including for example claim 2, further characterize structural components that effect such advantages. With respect to claim 30, the integration of knife-edge sealing edge with the individual vessels offers several advantages over the art of record, including for example, the interchangeability of single vessels (e.g., rather than the entire array of vessels), for example if the need arises to replace one of the vessels.

V. Conclusion:

In view of the foregoing, reconsideration and allowance of claims 1-10, 12-21, and 23-34 are respectfully requested. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8695.

Respectfully submitted,



Cindy S. Kaplan
Reg. No. 40,043

RITTER, LANG & KAPLAN LLP
12930 Saratoga Ave., Suite D1
Saratoga, CA 95070
Tel: 408-446-8690
Fax: 408-446-8691